Elections 2022

Federative Republic of Brazil
*Document under confidentiality - **Prohibited Disclosure***

Compliance Analysis

October 29th, 2022

2022 FIRST ROUND BRAZILIAN PRESIDENTIAL ELECTIONS VULNERABILITY ANALYSIS REPORT

INTRODUCTION

The present document aims to report, from the perspective of a Forensic Science consolidated method based on a statistical analysis observational process, the 2022 First round Brazilian Election counting data. The observational method used is Benford's Law.

The observated data used is available on the Brazilian Superior Electoral Court`s (*Tribunal Superior Eleitoral - TSE).*

NEWCOMB-BENFORD'S LAW

Benford's Law, also called the law of the first digit, or Newcomb-Benford's Law, and the law of anomalous numbers, refers to the distribution of digits in various sources of real cases. Instead of expected homogeneity, the law states in many naturally occurring numbers collections the first significant digit is likely to be small. Without homogeneity, this distribution shows digit 1 has probability of appearing 30% in a statistical data set, while larger values are less likely to appear.

Frank Benford has shown this result applies to a wide variety of data sets, including electricity bills, addresses, stock prices, private equity prices, population numbers, death rates, river lengths, physical and mathematical constants, by power laws (which are very common in nature). All these statements are calculated or defined on a logarithmic scale.

Probability	0	1	2	3	4	5	6	7	8	9
1st position	---	30.1	17.6	12.5	9.7	7.9	6.7	5.8	5.1	4.6
2nd position	12	11.4	10.9	10.4	10	9.7	9.3	9	8.8	8.5
3th position	10.2	10.1	10.1	10.1	10	10	9.9	9.9	9.9	9.8

NEWCOMB-BENFORD'S LAW APPLICATIONS

- Judicial Evidence
- Electoral Data Analysis
- Macroeconomic Data
- Tax Fraud Analysis of
- Genome Data Analysis
- Scientific Fraud Detection

Following Benford's Law, or Looking Out for No. 1

By MALCOLM W. BROWNE AUG. 4, 1998

DR. THEODORE P. HILL asks his mathematics students at the Georgia Institute of Technology to go home and either flip a coin 200 times and record the results, or merely pretend to flip a coin and fake 200 results. The following day he runs his eye over the homework data, and to the students' amazement, he easily fingers nearly all those who faked their tosses.

"The truth is," he said in an interview, "most people don't know the real odds of such an exercise, so they can't fake data convincingly."

There is more to this than a classroom trick.

Dr. Hill is one of a growing number of statisticians, accountants and mathematicians who are convinced that an astonishing mathematical theorem known as Benford's Law is a powerful and relatively simple tool for pointing suspicion at frauds, embezzlers, tax evaders, sloppy accountants and even computer bugs.

(Benford's Law in New York Times)

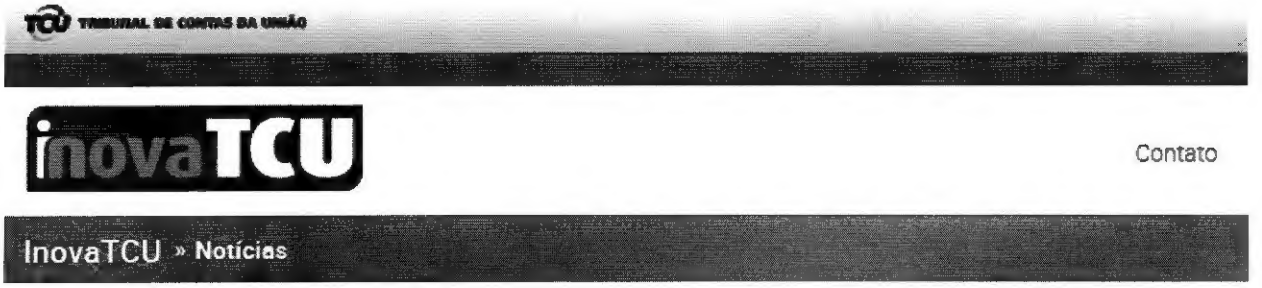
[https://www.nytimes.com/1998/08/04/science/following-benford-s-law-or-looking-out-for-no-1.html]

Benford's Law in Brazil

Written on **Auditors Brazilian Court (TCU)** website:

> *"Several studies have been conducted adopting the hypothesis that fabricated data is identified by digits deviation with respect to Benford's distribution."*
>
> *"Walter Mebane, an American statistician at the University of Michigan, has studied **election data from several countries**, including the United States, Russia, and Mexico."*
>
> *"The researcher analyzed the data from the **Iranian elections in 2009** and found anomalies that strongly indicated the occurrence of fraud in the victory of politician Ahmadinejad (Mebane, 2009)."*

[https://portal.tcu.gov.br/imprensa/noticias/aplicacoes-da-lei-de-benford-a-auditoria-de-obras-publicas.htm]



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Aplicações da Lei de Benford à auditoria de obras públicas

As análises de preços nas auditorias de obras públicas por vezes ocupam semanas de trabalho do auditor, pois, em muitos casos, as planilhas orçamentárias são extensas e de difícil análise. A Lei Newcomb-Benford é uma ferramenta de mineração de dados, alternativa à Curva ABC, que permite uma seleção possivelmente mais precisa dos serviços das planilhas para análise de preço.

/inovatcu/noticias/aplicacoes-da-lei-de-benford-a-auditoria-de-obras-publicas.htm

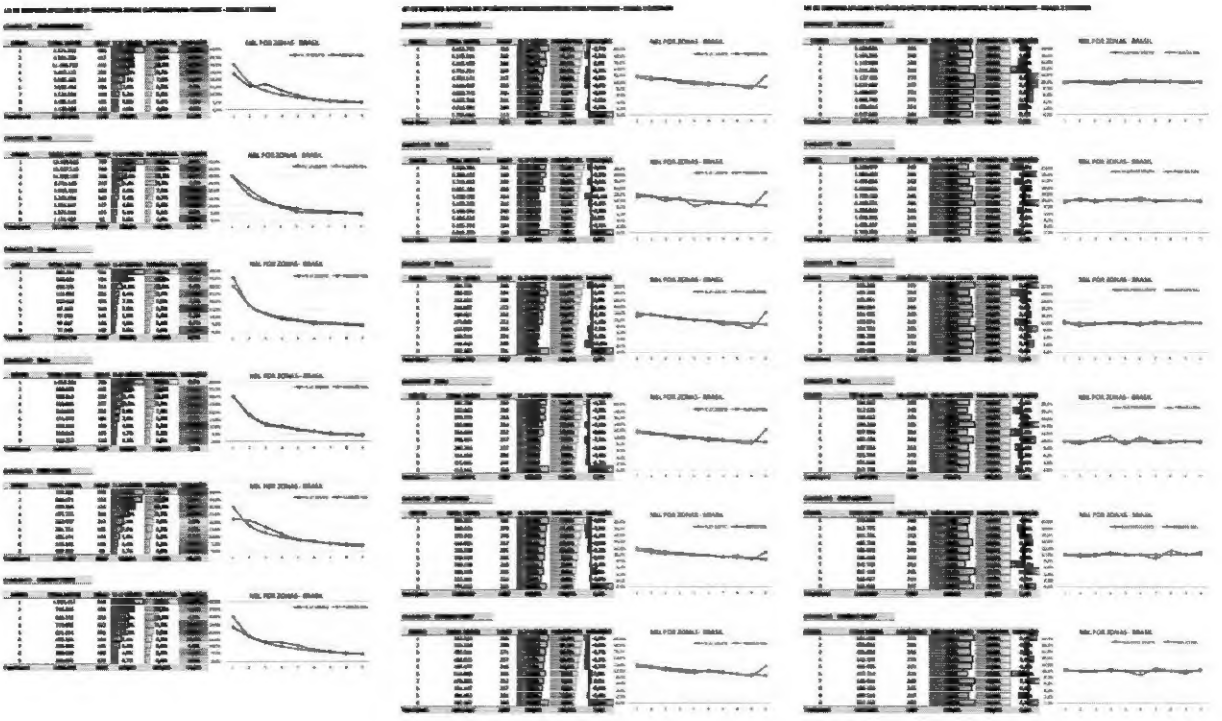
Walter Mebane, um estatístico americano da Universidade de Michigan, estudou dados eleitorais de vários países, incluindo os Estados Unidos, Rússia e México. Em 2006, ele descobriu que a contagem dos votos tendia a seguir a Lei de Benford no segundo dígito (Mebane, 2006). O pesquisador analisou os dados das eleições iranianas em 2009 e encontrou anomalias que indicavam fortemente a ocorrência de fraude na vitória do político Ahmadinejad (Mebane, 2009). Mebane verificou que, nas cidades com poucos votos inválidos, os números de Ahmadinejad passavam longe da distribuição de Benford e que o candidato, nessas situações, possuía uma grande vantagem nos votos.

Considering the highest national auditing body recognizes and propagates the use of Benford Logic in public audits, including at the electoral level, we began to analyze the

2022 Brazilian presidential election first round data. This technique allows us to make very quick conclusions about the numerical sets's consistency.

NEWCOMB-BENFORD'S LAW IN BRAZILIAN ELECTIONS

The 2022 Brazilian presidential election first round data analysis revealed statistical sets inconsistencies. This fact does not assert itselfs there was intervention or data external tampering. This can only be affirmed after meticulous and detailed investigation from the standpoint of *defending the* **National Sovereignty** *interests*. There was undoubted proof of external access to the electoral operation system in recent past elections. The subject was headlined in several media and the electoral system operator itself recognized this fact, including the forwarding of documents to police authorities. But the 2022 numerical indications - regardless of this fact and before considering whether there were external vulnerabilities in the last election - corroborate the need for protective measures as a precautionary measure. See the electoral zone grouping charts below.



As an example, this is a panoramic view of data analysis grouped by electoral zones. It is possible to verify there are many numerical sets, in different readings and formats, that

present apparent non-conformities with the NBL parameters, which will be the object of specific deeper analysis.

Pure data was used for the analysis, obtained from the TSE (Superior Electoral Court) data repository. [https://www.tse.jus.br/eleicoes/eleicoes-2022/divulgacao-dos-resultados-das-eleicoes-2022]

The data was properly decompressed and inserted in appropriate databases - in parallel and redundant checking operations - in order to preserve the originality of the data in the imported tables. The main analysis was restricted and concentrated on the position for president, reaching the candidates with the 4 highest votes, and also comparing the "White" and "Null" votes.

The application of the 1st digit rule for NBL requires numbers that meet all numeric series that reach the digits 1 to 9, in the case of Electoral Zones and Cities. Both serve the purpose of leveraging the NBL (Newcomb-Benford Law) rule. However, the study done by cities, if performed with a very restricted universe, may generate distortions.

The population distance between the largest and the smallest electoral zone in Brazil has a smaller interval than the population distance between the smallest and the largest Brazilian municipality.

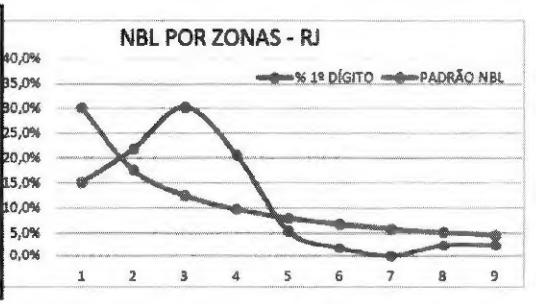
The first study part uses the 1st digit NBL rule, in which the 2,637 Electoral Zones in Brazil and abroad were evaluated. The presence of distortion is noted, where the average deviation exceeds the possible margins of error.

As an initial planimetric overview, some graphs are presented in sequence. These are the data will be further study object (1):

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - RIO DE JANEIRO

NM_VOTAVEL JAIR BOLSONARO

DÍGITO	QT_VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	369.135	25	15,2%	30,1%	-49,7%
2	962.966	36	21,8%	17,6%	23,9%
3	1.703.758	50	30,3%	12,5%	142,6%
4	1.358.153	34	20,6%	9,7%	112,7%
5	292.276	9	5,5%	7,9%	-31,1%
6	74.099	3	1,8%	6,7%	-72,8%
7	0	0	0,0%	5,8%	-100,0%
8	34.209	4	2,4%	5,1%	-52,7%
9	36.650	4	2,4%	4,6%	-47,1%
Total Geral	4.831.246	165	100,0%	100,0%	67,5%

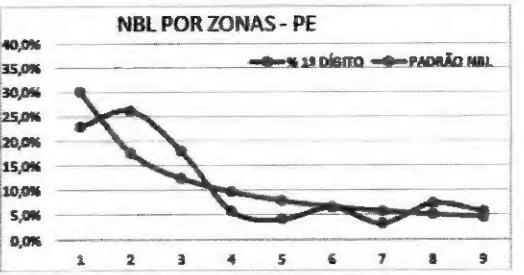


(1) This table contains the UMIs - Minimal Informational Units - used for the present study. It will be repeated several times during the text. It is generated in Portuguese, because it reflects images captured directly from the primary data processing. Its columns are as follows, with their respective meanings in English: Digit/Quantity Votes / NBL1st / %1st Digit/ NBL Pattern / Variation / NBL by Zones / Total

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - PERNAMBUCO

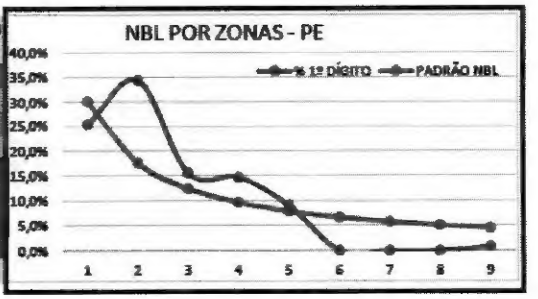
NM_VOTAVEL JAIR BOLSONARO

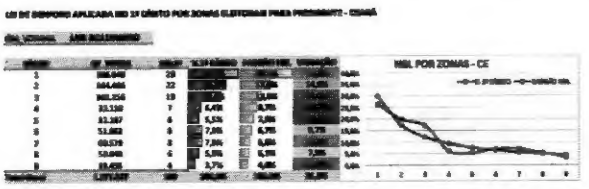
DÍGITO	QT_VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	313.796	28	23,0%	30,1%	-23,6%
2	354.527	32	26,2%	17,6%	48,9%
3	570.906	22	18,0%	12,5%	44,4%
4	140.155	7	5,7%	9,7%	-40,8%
5	28.070	5	4,1%	7,9%	-48,3%
6	51.005	8	6,6%	6,7%	-2,0%
7	30.521	4	3,3%	5,8%	-43,5%
8	76.150	9	7,4%	5,1%	44,1%
9	65.808	7	5,7%	4,6%	25,3%
Total Geral	1.630.938	122	100,0%	100,0%	35,7%

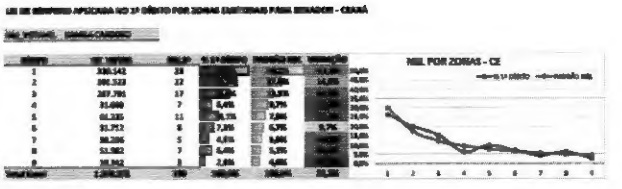


NM_VOTAVEL LULA

DÍGITO	QT_VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	504.494	31	25,6%	30,1%	-15,6%
2	1.003.556	42	34,4%	17,6%	95,4%
3	650.745	19	15,6%	12,5%	24,7%
4	816.827	18	14,8%	9,7%	52,3%
5	573.275	11	9,0%	7,9%	13,8%
6	0	0	0,0%	6,7%	-100,0%
7	0	0	0,0%	5,8%	-100,0%
8	0	0	0,0%	5,1%	-100,0%
9	9.425	1	0,8%	4,6%	-82,7%
Total Geral	3.558.322	122	100,0%	100,0%	64,0%





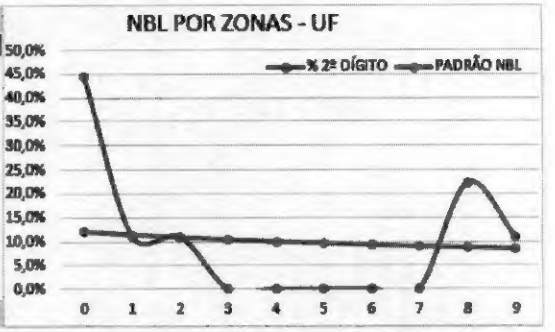


The cases above (RJ, CE and PE States) were demarcated because they showed a high incidence of "zero" in cells where there should be a positive value. They are here placed as detected anomalies at the State level examples. However, their isolated study cannot be dissociated from the global study with aggregated data.

LEI DE BENFORD APLICADA NO 2º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - POR UF

UF AC
CANDIDATO JAIR BOLSONARO

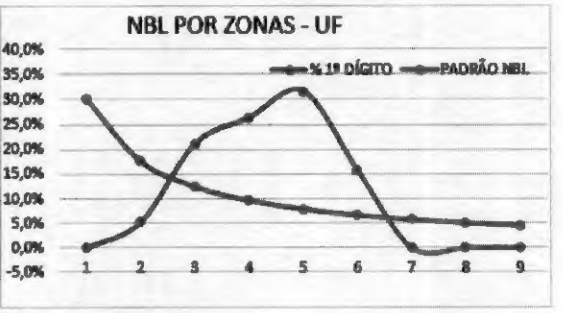
DÍGITO	TOTAL VOTOS	NBL2º	% 2º DÍGITO	PADRÃO NBL	VARIAÇÃO
0	90.614	4	[illegible]	12,0%	[illegible]
1	6.191	1	11,1%	11,4%	-2,5%
2	72.734	1	11,1%	10,9%	1,9%
3	0	0	0,0%	10,4%	-100,0%
4	0	0	0,0%	10,0%	-100,0%
5	0	0	0,0%	9,7%	-100,0%
6	0	0	0,0%	9,3%	-100,0%
7	0	0	0,0%	9,0%	-100,0%
8	36.817	2	[illegible]	[illegible]	[illegible]
9	69.226	1	11,1%	8,5%	30,7%
Total Geral	275.582	9	100,0%	100,0%	95,3%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - POR UF

UF DF
CANDIDATO JAIR BOLSONARO

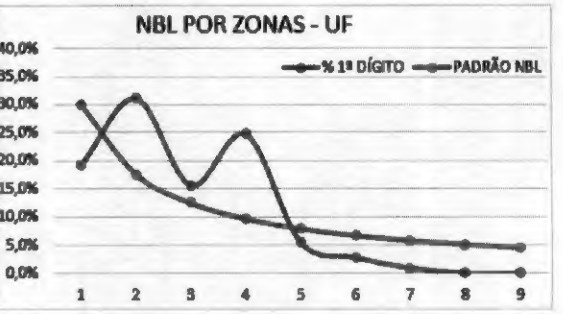
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	0	0	0,0%	30,1%	[illegible]
2	28.290	1	5,3%	17,6%	-70,1%
3	132.573	4	[illegible]	12,5%	68,6%
4	232.124	5	[illegible]	9,7%	171,6%
5	323.115	6	[illegible]	7,9%	298,7%
6	194.295	3	15,8%	6,7%	136,0%
7	0	0	0,0%	5,8%	-100,0%
8	0	0	0,0%	5,1%	-100,0%
9	0	0	0,0%	4,6%	-100,0%
Total Geral	910.397	19	100,0%	100,0%	129,7%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - POR UF

UF CE
CANDIDATO LULA

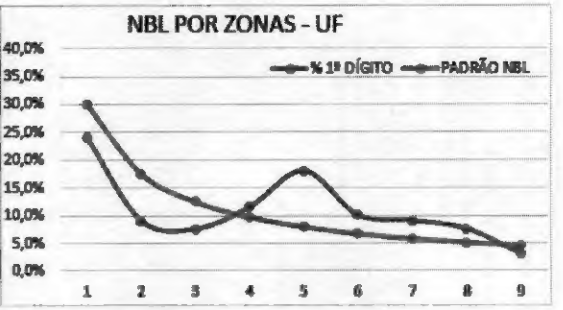
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	346.705	21	[illegible]	30,1%	-36,0%
2	836.121	34	[illegible]	17,6%	77,1%
3	604.237	17	[illegible]	12,5%	24,9%
4	1.211.873	27	[illegible]	9,7%	[illegible]
5	309.723	6	5,5%	7,9%	-30,5%
6	195.459	3	2,8%	6,7%	-58,9%
7	74.237	1	0,9%	5,8%	-84,2%
8	0	0	0,0%	5,1%	-100,0%
9	0	0	0,0%	4,6%	-100,0%
Total Geral	3.578.355	109	100,0%	100,0%	68,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - POR UF

UF	BA
CANDIDATO	JAIR BOLSONARO

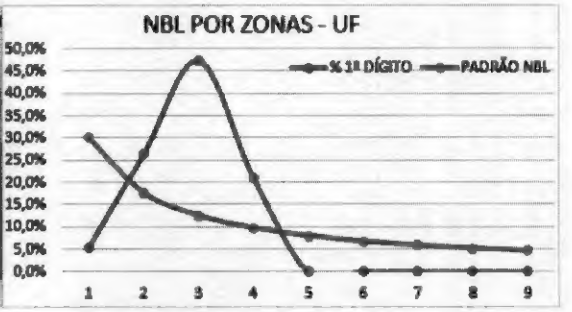
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	735.732	48	[illegible]	[illegible]	-19,5%
2	334.500	18	9,0%	17,6%	[illegible]
3	228.035	15	7,5%	12,5%	[illegible]
4	103.120	23	11,6%	9,7%	19,3%
5	197.271	36	[illegible]	7,9%	[illegible]
6	128.393	20	10,1%	6,7%	50,2%
7	135.615	18	9,0%	5,8%	56,0%
8	128.804	15	7,5%	5,1%	47,2%
9	56.129	6	3,0%	4,6%	[illegible]
Total Geral	2.047.599	199	100,0%	100,0%	47,3%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - POR UF

UF	DF
CANDIDATO	LULA

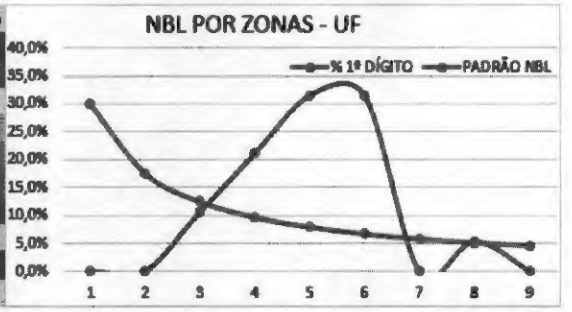
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	19.602	1	5,3%	[illegible]	-82,5%
2	128.291	5	[illegible]	17,6%	49,4%
3	330.102	9	[illegible]	12,5%	[illegible]
4	171.539	4	[illegible]	9,7%	117,3%
5	0	0	0,0%	7,9%	[illegible]
6	0	0	0,0%	6,7%	[illegible]
7	0	0	0,0%	5,8%	[illegible]
8	0	0	0,0%	5,1%	[illegible]
9	0	0	0,0%	4,6%	[illegible]
Total Geral	649.534	19	100,0%	100,0%	109,2%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - POR UF

UF	DF
CANDIDATO	SIMONE TEBET

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	0	0	0,0%	[illegible]	[illegible]
2	0	0	0,0%	17,6%	[illegible]
3	6.771	2	10,5%	12,5%	-15,7%
4	18.757	4	[illegible]	9,7%	117,3%
5	32.942	6	[illegible]	7,9%	[illegible]
6	38.634	6	[illegible]	6,7%	[illegible]
7	0	0	0,0%	5,8%	[illegible]
8	8.273	1	5,3%	5,1%	2,8%
9	0	0	0,0%	4,6%	[illegible]
Total Geral	105.377	19	100,0%	100,0%	147,3%



Similarly to the isolated state-level data from DF, AC, BA, and CE, states also show anomaly identification in the detected groups records.

Considering the short time between the expedition of the definitive results and the analysis, it is evident the need to unfold these referenced foci as a particularized observation point.

If it were the case of a specific document audit [the primary purpose of Benford's Law, i.e., to ***select indicative focuses*** *and to conduct a* ***document audit***], these would be the first round of specific document audits potential focuses. This is not possible in the current Brazilian electoral model, considering the inexistence of a documental collection that could elide the doubts pointed out by Benford's examination in these foci.

We present below all the data tables referring to the votes obtained by the 4 most voted candidates, with the tabulations referring to blank and spoiled votes, in the following order:

a) National Quantitative;

b) Regional Quantitative.

A total of 36 graphical data views regarding the LNB analysis in the 1st digit are presented below.

First, the national data aggregated by the first digit:

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - BRASIL E EXTERIOR

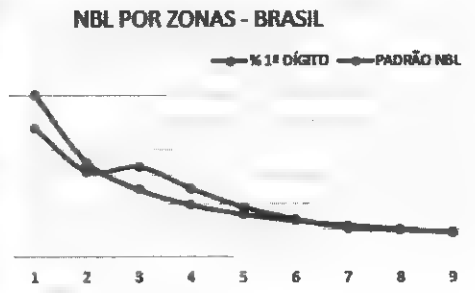
CANDIDATO LULA

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	12.183.566	797	[illegible]	30,1%	0,4%
2	13.527.515	566	[illegible]	17,6%	[illegible]
3	11.569.107	368	[illegible]0%	12,5%	[illegible]
4	8.754.140	247	9,4%	9,7%	-3,3%
5	9.810.180	158	6,0%	7,9%	[illegible]
6	8.206.934	143	5,4%	6,7%	[illegible]
7	1.556.847	127	4,8%	5,8%	[illegible]
8	1.375.018	135	5,1%	5,1%	0,0%
9	1.175.997	96	3,6%	4,6%	[illegible]
Total Geral	57.258.504	2637	100,0%	100,0%	13,0%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - BRASIL E EXTERIOR

CANDIDATO JAIR BOLSONARO

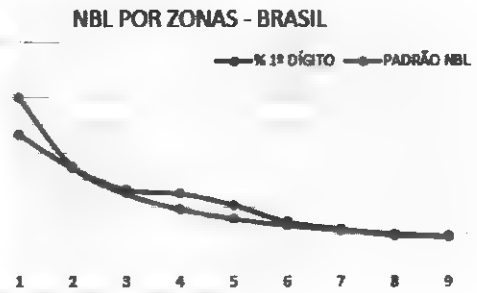
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	8.571.218	628	[illegible]	30,1%	[illegible]
2	8.284.229	417	[illegible]	17,6%	-10,2%
3	11.458.702	440	[illegible]	12,5%	[illegible]
4	9.447.172	333	[illegible]%	9,7%	[illegible]
5	6.085.102	244	[illegible]%	7,9%	[illegible]
6	3.083.434	184	7,0%	6,7%	4,3%
7	1.524.068	140	5,3%	5,8%	[illegible]
8	1.485.615	131	5,0%	5,1%	-3,0%
9	1.132.805	120	4,6%	4,6%	-0,6%
Total Geral	51.872.345	2637	100,0%	100,0%	14,8%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - BRASIL E EXTERIOR

CANDIDATO SIMONE TEBET

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	1.046.457	618	[illegible]	[illegible]	[illegible]
2	748.215	456	[illegible]	17,6%	-1,8%
3	642.293	350	[illegible]%	12,5%	6,3%
4	710.692	332	[illegible]%	9,7%	[illegible]
5	631.814	276	[illegible]%	7,9%	[illegible]
6	472.269	194	7,4%	6,7%	10,0%
7	230.388	160	6,1%	5,8%	4,6%
8	228.620	128	4,9%	5,1%	[illegible]
9	204.675	123	4,7%	4,6%	1,8%
Total Geral	[illegible]	2637	[illegible]	100,0%	11,9%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - BRASIL E EXTERIOR

CANDIDATO CIRO GOMES

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	727.255	578	[illegible]	[illegible]	[illegible]
2	846.471	553	[illegible]	17,6%	19,1%
3	677.558	436	[illegible]	12,5%	[illegible]
4	475.755	314	[illegible]%	9,7%	[illegible]
5	223.997	213	[illegible]%	7,9%	2,0%
6	221.761	185	7,0%	6,7%	4,9%
7	186.151	144	5,5%	5,8%	-5,8%
8	133.146	116	4,4%	5,1%	[illegible]
9	107.193	98	3,7%	4,6%	[illegible]
Total Geral	3.599.287	2637	[illegible]	[illegible]	16,2%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - BRASIL E EXTERIOR

CANDIDATO Branco

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	863.384	931	[illegible]	[illegible]	[illegible]
2	333.921	464	[illegible]	17,6%	-0,1%
3	186.305	311	11,8%	12,5%	-5,6%
4	113.393	221	8,4%	9,7%	[illegible]
5	107.642	193	7,3%	7,9%	-7,6%
6	87.162	144	5,5%	6,7%	[illegible]
7	97.943	145	5,5%	5,8%	-5,2%
8	97.087	126	4,8%	5,1%	-6,7%
9	77.942	102	3,9%	4,6%	[illegible]
Total Geral	1.964.779	2637	[illegible]	[illegible]	6,9%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - BRASIL E EXTERIOR

CANDIDATO Nulo

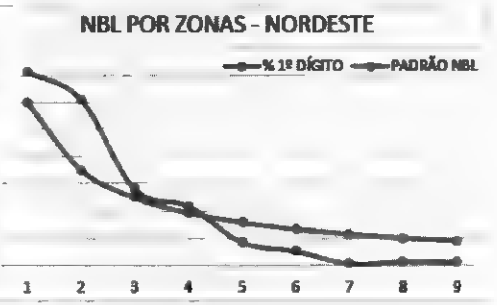
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	1.053.561	798	[illegible]	[illegible]	0,5%
2	833.892	492	[illegible]	17,6%	[illegible]
3	503.313	300	11,4%	12,5%	-8,9%
4	329.045	277	10,5%	9,7%	8,4%
5	219.943	222	8,4%	7,9%	6,3%
6	171.073	184	7,0%	6,7%	4,3%
7	128.148	129	4,9%	5,8%	[illegible]
8	118.642	125	4,7%	5,1%	-7,4%
9	130.257	110	4,2%	4,6%	[illegible]
Total Geral	3.487.874	2637	[illegible]	[illegible]	7,6%

Here the data by region:

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO LULA

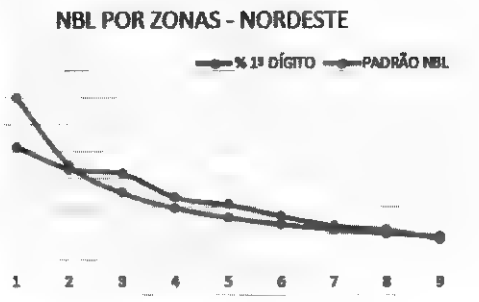
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	4.480.557	287	[illegible]	[illegible]	18,0%
2	5.934.409	246	[illegible]	17,6%	[illegible]
3	3.872.044	113	14,0%	12,5%	12,0%
4	3.965.544	88	10,9%	9,7%	[illegible]
5	1.819.159	35	4,3%	7,9%	-45,3%
6	1.398.930	22	2,7%	6,7%	-59,3%
7	163.823	4	0,5%	5,8%	[illegible]
8	60.431	7	0,9%	5,1%	[illegible]
9	58.242	6	0,7%	4,6%	[illegible]
Total Geral	21.753.139	808	[illegible]	[illegible]	50,1%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO JAIR BOLSONARO

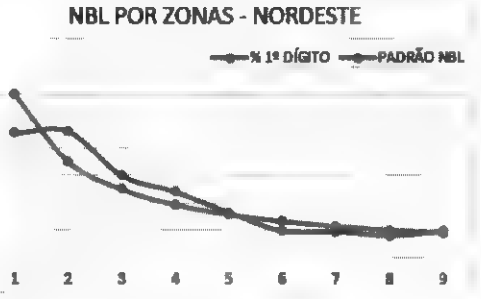
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	2.124.732	169	[illegible]	30,1%	[illegible]
2	1.690.646	136	[illegible]	17,6%	-4,4%
3	1.892.150	129	[illegible]	12,5%	[illegible]
4	920.508	94	[illegible]	9,7%	20,1%
5	593.046	83	[illegible]	7,9%	[illegible]
6	481.469	66	[illegible]	6,7%	[illegible]
7	389.759	52	6,4%	5,8%	11,0%
8	391.888	46	5,7%	5,1%	11,2%
9	303.196	33	4,1%	4,6%	[illegible]
Total Geral	[illegible]	[illegible]	[illegible]	[illegible]	15,8%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO SIMONE TEBET

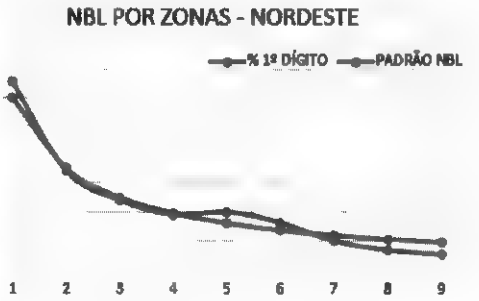
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	146.129	184	[illegible]	[illegible]	[illegible]
2	159.606	187	[illegible]	17,6%	[illegible]
3	117.808	121	[illegible]	12,5%	19,9%
4	[illegible]	97	[illegible]	9,7%	[illegible]
5	54.241	67	[illegible]	7,9%	4,7%
6	[illegible]	40	5,0%	6,7%	[illegible]
7	[illegible]	39	4,8%	5,8%	-16,8%
8	25.616	33	4,1%	5,1%	[illegible]
9	33.597	40	5,0%	4,6%	8,1%
Total Geral	[illegible]	[illegible]	[illegible]	[illegible]	19,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO Branco

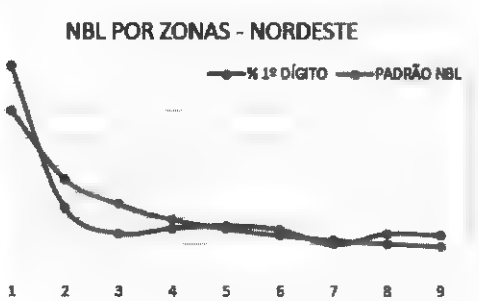
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	192.822	266	[illegible]	30,1%	[illegible]
2	48.147	139	[illegible]	17,6%	-2,3%
3	33.539	97	[illegible]	12,5%	-3,9%
4	34.205	76	9,4%	9,7%	-2,9%
5	43.619	80	9,9%	7,9%	[illegible]
6	40.360	65	8,0%	6,7%	[illegible]
7	28.427	39	4,8%	5,8%	-16,8%
8	19.666	26	3,2%	5,1%	[illegible]
9	17.174	20	2,5%	4,6%	[illegible]
Total Geral	457.959	[illegible]	[illegible]	[illegible]	18,2%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO Nulo

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	424.334	307	[illegible]	[illegible]	26,2%
2	217.835	96	11,9%	17,6%	[illegible]
3	121.442	57	7,1%	12,5%	[illegible]
4	69.876	65	8,0%	9,7%	[illegible]
5	47.974	69	8,5%	7,9%	7,8%
6	46.044	63	7,8%	6,7%	16,5%
7	29.913	40	5,0%	5,8%	-14,6%
8	[illegible]	57	7,1%	5,1%	[illegible]
9	51.045	54	6,7%	4,6%	[illegible]
Total Geral	[illegible]	[illegible]	[illegible]	[illegible]	26,6%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

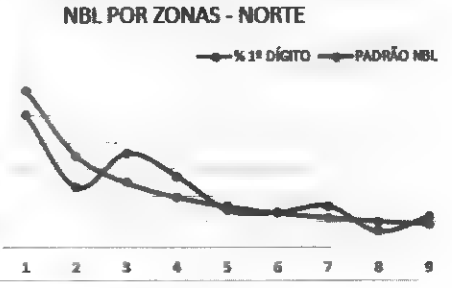
CANDIDATO CIRO GOMES

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	227.754	156	[illegible]	[illegible]	[illegible]
2	130.455	96	[illegible]	17,6%	[illegible]
3	187.234	114	[illegible]	12,5%	13,0%
4	112.022	93	[illegible]	9,7%	18,8%
5	71.935	86	[illegible]	7,9%	34,4%
6	81.767	90	[illegible]	6,7%	[illegible]
7	114.405	72	[illegible]	5,8%	53,6%
8	74.647	62	[illegible]	5,1%	49,9%
9	53.402	39	4,8%	4,6%	5,4%
Total Geral	1.183.631	[illegible]	[illegible]	[illegible]	28,3%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO JAIR BOLSONARO

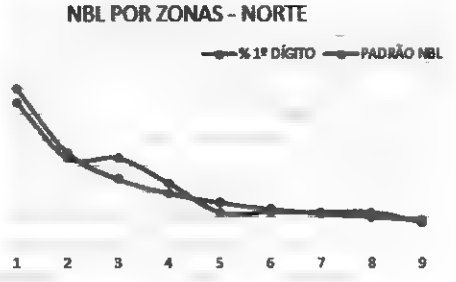
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	748.943	63	[illegible]	[illegible]	-15,9%
2	471.001	29	[illegible]6%	17,6%	[illegible]
3	862.624	45	[illegible]	12,5%	44,7%
4	789.233	34	[illegible]7%	9,7%	[illegible]
5	590.606	18	7,2%	7,9%	-8,7%
6	287.284	17	6,8%	6,7%	2,1%
7	356.009	20	8,0%	5,8%	[illegible]
8	147.553	8	3,2%	5,1%	[illegible]
9	142.908	15	6,0%	4,6%	[illegible]
Total Geral	4.396.161	[illegible]	[illegible]	[illegible]	28,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO LULA

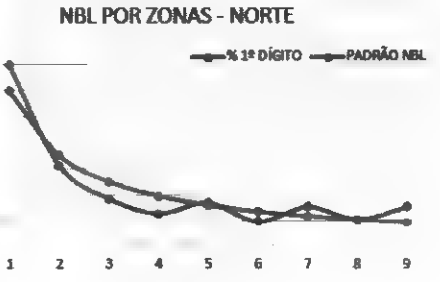
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	950.884	68	[illegible]	[illegible]	-9,3%
2	948.658	41	[illegible]5%	17,6%	-6,5%
3	1.028.461	41	[illegible]5%	12,5%	[illegible]
4	675.559	29	[illegible]6%	9,7%	20,2%
5	230.256	15	6,0%	7,9%	[illegible]
6	320.391	15	6,0%	6,7%	-10,0%
7	177.425	15	6,0%	5,8%	3,9%
8	127.605	15	6,0%	5,1%	17,7%
9	95.391	10	4,0%	4,6%	[illegible]
Total Geral	4.556.630	249	[illegible]	[illegible]	15,2%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO Branco

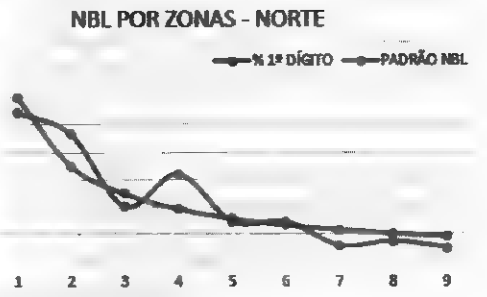
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	39.169	87	[illegible]	[illegible]	16,1%
2	8.259	39	[illegible],7%	17,6%	-11,1%
3	4.470	23	9,2%	12,5%	[illegible]
4	4.300	16	6,4%	9,7%	[illegible]
5	5.118	21	8,4%	7,9%	6,5%
6	4.408	12	4,8%	6,7%	[illegible]
7	7.516	19	7,6%	5,8%	[illegible]
8	4.840	13	5,2%	5,1%	2,0%
9	8.745	19	7,6%	4,6%	[illegible]
Total Geral	86.825	249	[illegible]	[illegible]	24,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO Nulo

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	60.686	68	[illegible]	30,1%	-9,3%
2	38.846	58	[illegible]	17,6%	32,3%
3	11.551	25	10,0%	12,5%	-19,6%
4	17.655	40	[illegible]	9,7%	[illegible]
5	9.363	18	7,2%	7,9%	-8,7%
6	11.828	18	7,2%	6,7%	8,1%
7	4.521	7	2,8%	5,8%	[illegible]
8	5.459	9	3,6%	5,1%	-29,4%
9	5.687	6	2,4%	4,6%	[illegible]
Total Geral	165.596	249	100,0%	100,0%	28,0%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

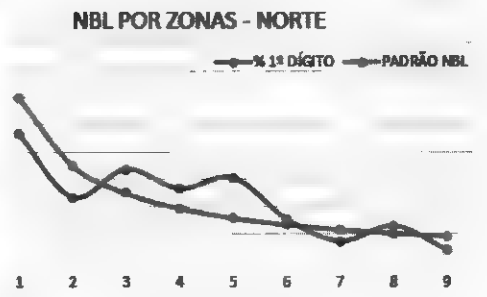
CANDIDATO CIRO GOMES

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	45.761	62	[illegible]	30,1%	-17,3%
2	86.272	71	[illegible]	17,6%	[illegible]
3	33.805	37	[illegible]	12,5%	19,0%
4	26.733	24	9,6%	9,7%	-0,5%
5	10.771	11	4,4%	7,9%	[illegible]
6	11.070	17	6,8%	6,7%	2,1%
7	6.990	12	4,8%	5,8%	-16,9%
8	4.393	6	2,4%	5,1%	[illegible]
9	5.976	9	3,6%	4,6%	-21,1%
Total Geral	231.771	249	100,0%	100,0%	25,2%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO SIMONE TEBET

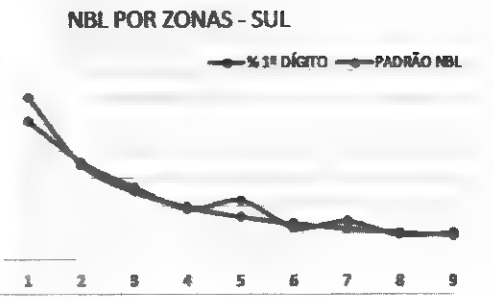
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	79.561	58	[illegible]	30,1%	-22,6%
2	36.619	29	11,6%	17,6%	[illegible]
3	59.224	42	[illegible]	12,5%	35,0%
4	58.642	33	[illegible]	9,7%	36,8%
5	94.632	38	[illegible]	7,9%	[illegible]
6	30.254	19	7,6%	6,7%	14,1%
7	6.790	9	3,6%	5,8%	[illegible]
8	29.509	16	6,4%	5,1%	25,5%
9	12.905	5	2,0%	4,6%	[illegible]
Total Geral	408.136	249	100,0%	100,0%	38,7%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUL

CANDIDATO JAIR BOLSONARO

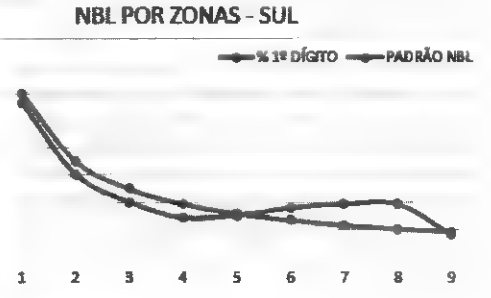
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	1.659.337	115	[illegible]	30,1%	[illegible]
2	1.880.248	81	[illegible]	17,6%	2,2%
3	1.869.956	60	[illegible]%	12,5%	6,8%
4	1.433.938	42	[illegible],3%	9,7%	-3,7%
5	1.273.860	49	[illegible],9%	7,9%	37,5%
6	740.042	27	6,0%	6,7%	-10,3%
7	310.680	32	7,1%	5,8%	22,6%
8	180.519	21	4,7%	5,1%	-8,9%
9	219.461	23	5,1%	4,6%	11,6%
Total Geral	9.568.041	450	100,0%	100,0%	13,2%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUL

CANDIDATO LULA

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	1.815.907	127	[illegible]	30,1%	-6,2%
2	1.570.402	68	[illegible]%	17,6%	-14,2%
3	1.063.129	45	10,0%	12,5%	-19,5%
4	647.144	32	7,1%	9,7%	[illegible]
5	234.020	34	7,6%	7,9%	-4,6%
6	258.991	40	8,9%	6,7%	32,9%
7	323.097	43	9,6%	5,8%	64,8%
8	365.640	43	9,6%	5,1%	[illegible]%
9	171.050	18	4,0%	4,6%	-12,7%
Total Geral	6.449.380	450	100,0%	100,0%	33,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUL

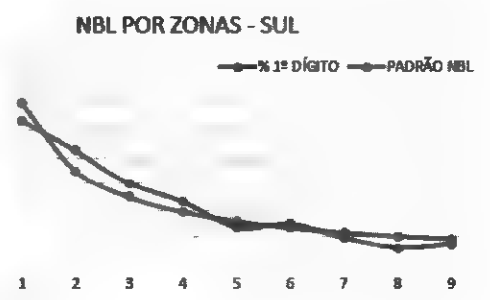
CANDIDATO Branco

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	145.260	152	[illegible]	30,1%	[illegible]
2	35.651	80	[illegible]%	17,6%	1,0%
3	19.442	55	12,2%	12,5%	-2,1%
4	17.232	38	8,4%	9,7%	-12,9%
5	16.321	30	6,7%	7,9%	-15,8%
6	14.882	23	5,1%	6,7%	-23,6%
7	23.369	32	7,1%	5,8%	22,6%
8	20.305	25	5,6%	5,1%	8,5%
9	12.648	15	3,3%	4,6%	[illegible]
Total Geral	385.110	450	100,0%	100,0%	14,6%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUL

CANDIDATO Nulo

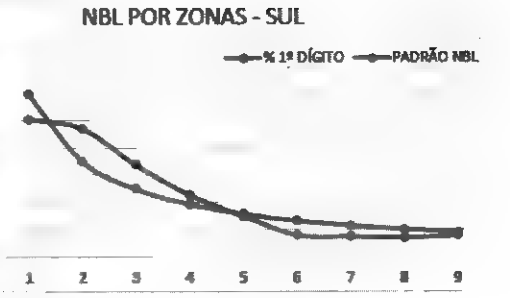
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	140.621	121	[illegible]	30,1%	-10,7%
2	86.990	96	[illegible]%	17,6%	[illegible]
3	35.106	68	[illegible]%	12,5%	21,0%
4	22.949	52	[illegible]%	9,7%	[illegible]
5	16.617	30	6,7%	7,9%	-15,8%
6	21.399	33	7,3%	6,7%	[illegible]
7	15.633	21	4,7%	5,8%	-19,5%
8	11.030	13	2,9%	5,1%	[illegible]
9	15.078	16	3,6%	4,6%	-22,4%
Total Geral	365.423	450	100,0%	100,0%	19,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUL

CANDIDATO CIRO GOMES

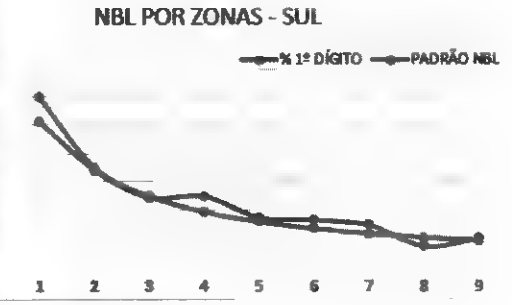
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	123.664	114	[illegible]	30,1%	-15,8%
2	126.569	106	[illegible]	17,6%	[illegible]
3	75.483	76	[illegible]	12,5%	35,2%
4	51.744	51	11,3%	9,7%	17,0%
5	28.250	34	7,6%	7,9%	-4,6%
6	11.797	18	4,0%	6,7%	[illegible]
7	12.656	17	3,8%	5,8%	34,9%
8	13.019	16	3,6%	5,1%	[illegible]
9	17.034	18	4,0%	4,6%	-12,7%
Total Geral	[illegible]	[illegible]	100,0%	[illegible]	23,3%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUL

CANDIDATO SIMONE TEBET

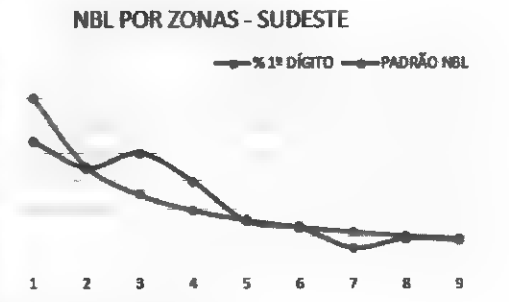
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	158.709	115	[illegible]	30,1%	[illegible]
2	166.055	77	[illegible]	17,6%	-2,8%
3	116.593	55	[illegible]	12,5%	-2,1%
4	130.147	56	[illegible]	9,7%	[illegible]
5	75.460	39	[illegible]	7,9%	9,4%
6	65.659	37	[illegible]	6,7%	22,9%
7	38.175	33	7,3%	5,8%	[illegible]
8	13.540	16	3,6%	5,1%	[illegible]
9	54.614	22	4,9%	4,6%	6,7%
Total Geral	[illegible]	[illegible]	[illegible]	[illegible]	15,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUDESTE

CANDIDATO JAIR BOLSONARO

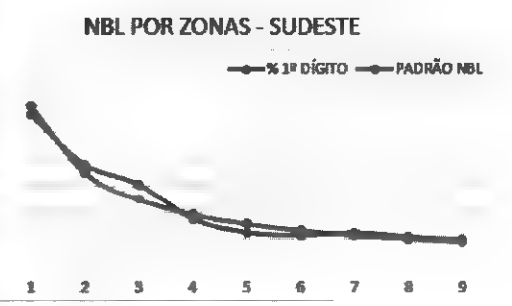
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	2.831.603	201	[illegible]	30,1%	[illegible]
2	[illegible]	158	[illegible]	17,6%	-1,6%
3	[illegible]	182	[illegible]	12,5%	[illegible]
4	5.170.173	135	[illegible]	9,7%	[illegible]
5	2.728.932	70	7,7%	7,9%	-3,1%
6	1.301.757	59	6,5%	6,7%	-3,3%
7	393.510	26	2,9%	5,8%	[illegible]
8	[illegible]	42	4,6%	5,1%	-10,1%
9	372.439	39	4,3%	4,6%	-6,6%
Total Geral	[illegible]	912	100,0%	100,0%	24,5%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUDESTE

CANDIDATO LULA

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	4.048.579	258	[illegible]	30,1%	[illegible]
2	4.215.582	174	[illegible]	17,6%	8,3%
3	4.736.655	140	[illegible]	12,5%	[illegible]
4	3.195.738	80	8,8%	9,7%	-9,5%
5	1.535.919	57	6,3%	7,9%	[illegible]
6	1.137.808	52	5,7%	6,7%	[illegible]
7	834.098	57	6,3%	5,8%	7,8%
8	643.416	49	5,4%	5,1%	4,9%
9	689.299	45	4,9%	4,6%	7,7%
Total Geral	[illegible]	912	[illegible]	[illegible]	[illegible]



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUDESTE

CANDIDATO Branco

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	430.100	336	[illegible]	[illegible]	[illegible]
2	229.762	165	[illegible]1%	17,6%	2,7%
3	122.144	116	12,7%	12,5%	1,8%
4	46.572	75	8,2%	9,7%	-15,1%
5	37.801	52	5,7%	7,9%	-28,0%
6	25.396	39	4,3%	6,7%	[illegible]
7	32.347	43	4,7%	5,8%	-18,7%
8	41.024	48	5,3%	5,1%	2,8%
9	35.050	38	4,2%	4,6%	-9,0%
Total Geral	[illegible]	912	[illegible]	[illegible]	14,2%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUDESTE

CANDIDATO Nulo

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	362.768	247	[illegible]	[illegible]	10,0%
2	435.229	188	[illegible]	17,6%	[illegible]
3	323.989	118	[illegible]9%	12,5%	3,6%
4	204.009	97	[illegible]0,6%	9,7%	[illegible]
5	132.292	80	[illegible]8,8%	7,9%	[illegible]
6	84.101	58	6,4%	6,7%	[illegible]
7	71.942	53	5,8%	5,8%	0,2%
8	48.669	39	4,3%	5,1%	[illegible]
9	56.525	32	3,5%	4,6%	[illegible]
Total Geral	1.719.524	912	[illegible]	[illegible]	10,9%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUDESTE

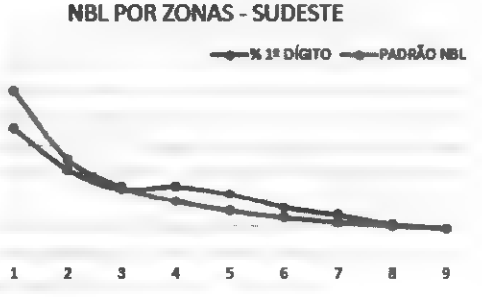
CANDIDATO CIRO GOMES

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	276.812	192	[illegible]1%	[illegible]	[illegible]
2	390.605	221	[illegible]	17,6%	[illegible]
3	326.240	171	[illegible]	12,5%	[illegible]
4	246.504	114	[illegible]5%	9,7%	[illegible]
5	105.763	68	7,5%	7,9%	-5,9%
6	106.475	52	5,7%	6,7%	-14,8%
7	49.976	40	4,4%	5,8%	[illegible]
8	[illegible]	28	3,1%	5,1%	[illegible]
9	24.918	26	2,9%	4,6%	[illegible]
Total Geral	1.566.574	912	[illegible]	[illegible]	28,6%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO SUDESTE

CANDIDATO SIMONE TEBET

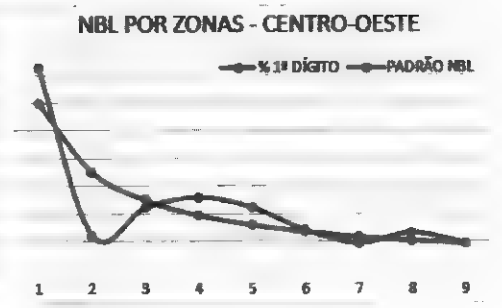
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	581.359	210	[illegible]	[illegible]	[illegible]
2	354.855	142	[illegible]5,6%	17,6%	11,6%
3	309.278	110	[illegible]2,1%	12,5%	-3,4%
4	359.701	114	[illegible]2,5%	9,7%	29,0%
5	337.262	101	[illegible]1,1%	7,9%	[illegible]
6	261.663	78	[illegible]8,6%	6,7%	27,8%
7	141.650	65	[illegible]7,1%	5,8%	[illegible]
8	141.573	50	5,5%	5,1%	7,1%
9	90.207	42	4,6%	4,6%	[illegible]
Total Geral	2.577.548	912	[illegible]	[illegible]	17,8%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO CENTRO-OESTE

CANDIDATO JAIR BOLSONARO

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	1.084.055	79	[illegible]	[illegible]	20,9%
2	287.026	13	6,0%	[illegible]	[illegible]
3	765.139	24	11,1%	12,5%	-11,4%
4	1.133.320	28	12,9%	9,7%	[illegible]
5	898.658	24	11,1%	[illegible]	[illegible]
6	272.882	15	6,9%	6,7%	3,3%
7	74.110	10	4,6%	5,8%	-20,5%
8	117.681	14	6,5%	5,1%	[illegible]
9	94.801	10	4,6%	4,6%	0,6%
Total Geral	4.727.672	217	[illegible]	[illegible]	24,2%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO CENTRO-OESTE

CANDIDATO LULA

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	748.706	56	[illegible]	[illegible]	[illegible]
2	858.464	37	[illegible]	12,5%	-3,2%
3	868.818	29	[illegible]	9,7%	7,0%
4	270.155	18	8,3%	[illegible]	[illegible]
5	91.026	17	7,8%	7,9%	-1,1%
6	90.814	14	6,5%	6,7%	-3,6%
7	58.404	8	3,7%	5,8%	[illegible]
8	177.926	21	[illegible]	5,1%	[illegible]
9	162.015	17	7,8%	4,6%	[illegible]
Total Geral	3.326.328	217	[illegible]	[illegible]	38,9%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO CENTRO-OESTE

CANDIDATO Branco

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	56.033	90	[illegible]	[illegible]	[illegible]
2	12.102	41	[illegible]	12,5%	7,3%
3	6.710	20	9,2%	12,5%	-26,2%
4	6.227	15	6,9%	9,7%	-28,7%
5	4.983	10	4,6%	7,9%	-41,8%
6	2.116	5	2,3%	6,7%	[illegible]
7	6.284	12	5,5%	5,8%	-4,7%
8	11.252	14	6,5%	5,1%	[illegible]
9	4.325	10	4,6%	4,6%	0,6%
Total Geral	130.032	217	[illegible]	[illegible]	26,7%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO CENTRO-OESTE

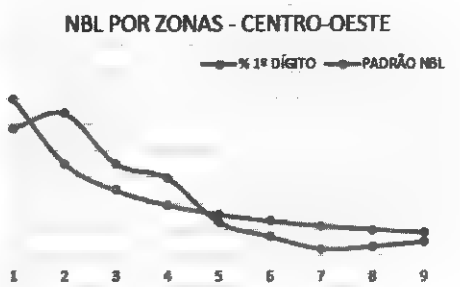
CANDIDATO Nulo

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	65.152	55	25,5%	30,1%	-15,8%
2	54.992	54	25,1%	17,6%	41,8%
3	11.225	32	14,7%	12,5%	18,1%
4	9.906	22	10,1%	9,7%	4,6%
5	13.697	25	11,5%	7,9%	45,5%
6	7.701	12	5,5%	6,7%	-17,3%
7	6.139	8	3,7%	5,8%	-36,4%
8	5.139	7	3,2%	5,1%	-37,0%
9	1.922	2	0,9%	4,6%	-79,2%
Total Geral	175.873	217	100,0%	100,0%	31,9%

LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO CENTRO-OESTE

CANDIDATO CIRO GOMES

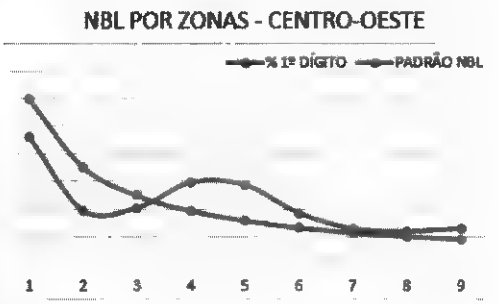
DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	39.923	53	24,4%	30,1%	-18,9%
2	62.560	59	27,2%	17,6%	54,4%
3	54.796	38	17,5%	12,5%	40,2%
4	38.752	32	14,7%	9,7%	52,2%
5	7.278	14	6,5%	7,9%	-18,5%
6	10.652	8	3,7%	6,7%	-44,9%
7	2.124	3	1,4%	5,8%	-76,2%
8	1.806	4	1,8%	5,1%	-64,0%
9	5.863	6	2,8%	4,6%	-39,6%
Total Geral	223.754	217	100,0%	100,0%	41,2%



LEI DE BENFORD APLICADA NO 1º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO CENTRO-OESTE

CANDIDATO SIMONE TEBET

DÍGITO	TOTAL VOTOS	NBL1º	% 1º DÍGITO	PADRÃO NBL	VARIAÇÃO
1	67.532	50	23,0%	30,1%	-23,5%
2	31.080	21	10,7%	17,6%	-39,0%
3	39.390	22	13,4%	12,5%	7,3%
4	79.052	32	26,9%	9,7%	177,3%
5	70.219	31	23,9%	7,9%	202,8%
6	82.467	20	28,1%	6,7%	319,2%
7	10.353	14	3,5%	5,8%	-39,4%
8	18.382	13	6,3%	5,1%	23,4%
9	13.352	14	4,5%	4,6%	-2,1%
Total Geral	411.827	217	100,0%	100,0%	89,8%



2ND DIGIT RULE

Another Benford Law technique used, works with the 2nd digit. The renowned researcher Walter Mebane, from University of Michigan, used this technique to evaluate the 2009 Iranian elections. Strong anomalies were found that indicated the victory of politician Ahmadinejad. In this series, the data were worked by electoral zones, considering the votes that reached more than 10 votes, in order to benefit only the 2nd digit.

The historical proportions for the second digit are as follows:

Probabilidades	0	1	2	3	4	5	6	7	8	9
1ª posição	—	30.1%	17.6%	12.5%	9.7%	7.9%	6.7%	5.8%	5.1%	4.6%
2ª posição	12%	11.4%	10.9%	10.4%	10%	9.7%	9.3%	9%	8.8%	8.5%
3ª posição	10.2%	10.1%	10.1%	10.1%	10%	10%	9.9%	9.9%	9.9%	9.8%

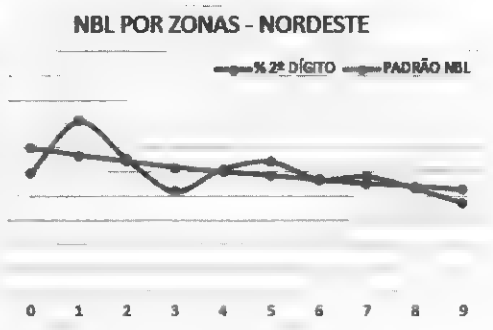
In the graphs below, it is possible to see the apparent distortions occurring in the totals aggregated by Electoral Zones of the Brazilian states, later grouped by geographic region. As shown in the graphs, a data aggregate amount which analysis focuses on the second digit can present apparent distortions. These distortions should be the object of specific studies, which will be seen in subsequent data series.

The following is a group of examples in which there are regions by the second digit clustering. There are also evidence of anomalies in data distribution:

LEI DE BENFORD APLICADA NO 2º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO JAIR BOLSONARO

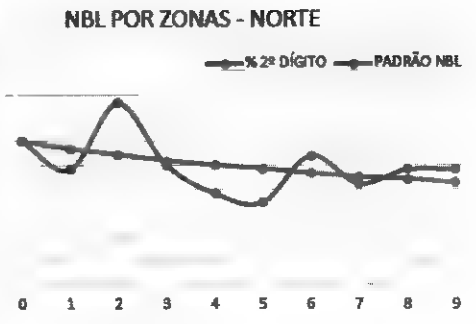
DÍGITO	TOTAL VOTOS	NBL2º	% 2º DÍGITO	PADRÃO NBL	VARIAÇÃO
0	952.122	80	[illegible]	12,0%	[illegible],5%
1	1.193.435	115	[illegible]	11,4%	24[illegible]
2	918.786	90	[illegible]	[illegible]%	2[illegible]%
3	677.633	68	[illegible]%	[illegible]%	[illegible],1%
4	1.048.935	83	[illegible]	[illegible]%	2[illegible]%
5	950.674	88	[illegible]%	9,7%	12[illegible]
6	738.499	76	[illegible]	[illegible]%	1[illegible]%
7	823.920	78	[illegible]%	[illegible]%	7[illegible]%
8	787.056	70	[illegible]%	[illegible]%	-[illegible],6%
9	696.334	60	[illegible],6%	8,5%	[illegible],6%
Total Geral	8.787.394	[illegible]	100,0%	100,0%	10,1%



LEI DE BENFORD APLICADA NO 2º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO JAIR BOLSONARO

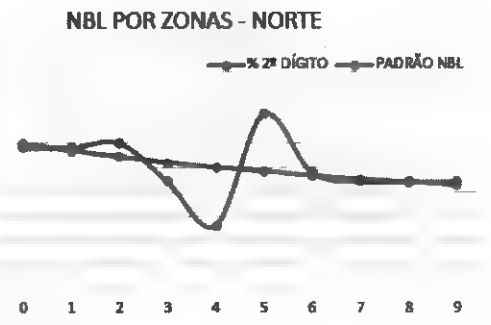
DÍGITO	TOTAL VOTOS	NBL2º	% 2º DÍGITO	PADRÃO NBL	VARIAÇÃO
0	343.427	30	[illegible]	12,0%	0,4%
1	347.584	24	[illegible]	11,4%	[illegible]5%
2	834.666	38	[illegible]	[illegible]	4[illegible]
3	501.349	25	[illegible]	[illegible]	-[illegible]5%
4	259.173	19	[illegible]	[illegible]	[illegible]7%
5	347.277	17	[illegible]8%	[illegible]	[illegible]6%
6	488.889	27	[illegible]	[illegible]	1[illegible]
7	340.309	21	[illegible]	[illegible]	-[illegible]3%
8	443.983	24	[illegible]	[illegible]	9[illegible]
9	489.504	24	[illegible]	[illegible]	1[illegible]
Total Geral	4.396.161	249	100,0%	100,0%	15,8%



LEI DE BENFORD APLICADA NO 2º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO Nulo

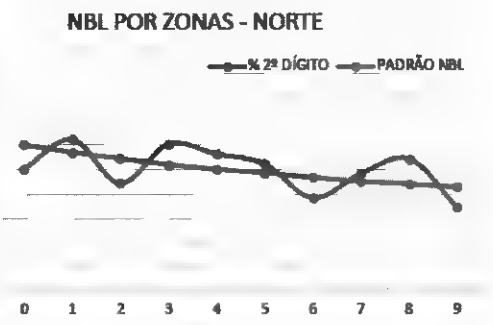
DÍGITO	TOTAL VOTOS	NBL2º	% 2º DÍGITO	PADRÃO NBL	VARIAÇÃO
0	18.325	29	[illegible]	12,0%	-2[illegible]%
1	22.981	29	[illegible]	11,4%	2,[illegible]%
2	17.580	30	[illegible]	[illegible]	10,[illegible]%
3	11.615	22	[illegible]	[illegible]	-[illegible]0%
4	8.085	13	5,2%	[illegible]	[illegible]8%
5	28.118	36	[illegible]	[illegible]	49,[illegible]
6	18.421	24	[illegible]	[illegible]	3,[illegible]%
7	11.259	22	[illegible]	[illegible]	-1,[illegible]%
8	9.563	22	[illegible]	[illegible]	0,[illegible]%
9	19.649	22	[illegible]	8,5%	3,[illegible]%
Total Geral	165.596	249	100,0%	100,0%	13,7%



LEI DE BENFORD APLICADA NO 2º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

CANDIDATO SIMONE TEBET

DÍGITO	TOTAL VOTOS	NBL2º	% 2º DÍGITO	PADRÃO NBL	VARIAÇÃO
0	49.254	25	[illegible]	12,0%	[illegible]3%
1	39.637	31	[illegible]	11,4%	9,[illegible]
2	25.607	22	[illegible]	[illegible]	[illegible]9%
3	44.260	30	[illegible]	[illegible]	15[illegible]
4	45.516	28	[illegible]	[illegible]	12[illegible]
5	59.111	26	[illegible]	[illegible]	7,[illegible]
6	32.853	19	[illegible]	[illegible]	[illegible]0%
7	33.801	24	[illegible]	[illegible]	7,[illegible]
8	55.353	27	[illegible]	[illegible]	23[illegible]
9	22.744	17	[illegible]	8,5%	[illegible],7%
Total Geral	488.136	249	100,0%	100,0%	14,8%



These 4 graphs present - all of them - show an average variation index higher than 10%.

Regarding the last digit analysis, we have a straight line, with the inversion of the parameters, instead of a descending curve with the ideal values of Benford 's Law. There is a lot of data and graphs of the entire electoral universal data from all over the country. As an example and indicative element, we bring some graphs described below:

LEI DE BENFORD APLICADA NO ÚLTIMO DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

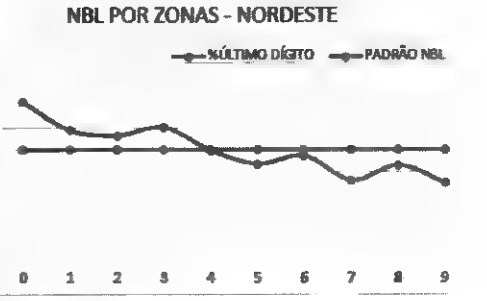
CANDIDATO Branco

DÍGITO	TOTAL VOTOS	NBL ÚLTIMO	%ÚLTIMO DÍGITO	PADRÃO NBL	VARIAÇÃO
0	59.826	96			
1	55.919	93			
2	58.569	97			
3	37.437	74			
4	51.556	89			
5	36.316	74			
6	44.404	79			
7	34.553	69			
8	42.095	74			
9	37.284	63			
Total Geral					

LEI DE BENFORD APLICADA NO ÚLTIMO DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO Nulo

DÍGITO	TOTAL VOTOS	NBL ÚLTIMO	%ÚLTIMO DÍGITO	PADRÃO NBL	VARIAÇÃO
0	135.223	116			
1	121.171	95			
2	115.197	91			
3	119.832	97			
4	114.805	80			
5	96.992	70			
6	108.932	76			
7	72.832	58			
8	98.685	69			
9	73.139	56			
Total Geral					



LEI DE BENFORD APLICADA NO ÚLTIMO DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORDESTE

CANDIDATO CIRO GOMES

DÍGITO	TOTAL VOTOS	NBL ÚLTIMO	%ÚLTIMO DÍGITO	PADRÃO NBL	VARIAÇÃO
0	120.097	99			
1	162.313	100			
2	112.846	85			
3	111.056	83			
4	119.778	82			
5	92.480	77			
6	124.771	92			
7	106.066	70			
8	80.953	65			
9	73.271	55			
Total Geral					

In these three numerical groups presented, there is a very interesting phenomenon from an analytical point of view. *Where there should be a line, there is a curve.*

There is another case with similar (but reversed) behavior derived from second digit data:

LEI DE BENFORD APLICADA NO 2º DÍGITO POR ZONAS ELEITORAIS PARA PRESIDENTE - REGIÃO NORTE

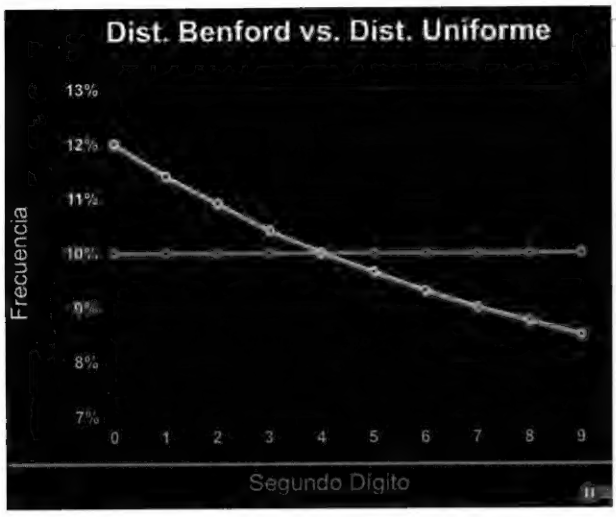
CANDIDATO **CIRO GOMES**

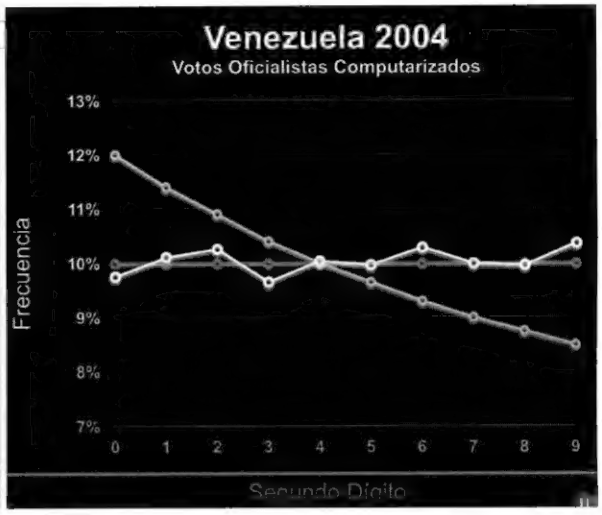
DÍGITO	TOTAL VOTOS	NBL2º	% 2º DÍGITO	PADRÃO NBL	VARIAÇÃO
0	22.945	23	9,2%	12,0%	23,0%
1	20.649	24	9,6%	11,4%	15,5%
2	18.136	26	10,4%	10,9%	4,2%
3	15.025	24	9,6%	10,4%	7,3%
4	17.493	22	8,8%	10,0%	11,6%
5	23.167	23	9,2%	9,7%	4,8%
6	23.102	21	8,4%	9,3%	9,3%
7	31.055	34	13,7%	9,0%	51,7%
8	29.593	25	10,0%	8,8%	14,1%
9	30.606	27	10,8%	8,5%	27,6%
Total Geral	231.771	249	100,0%	100,0%	17,6%

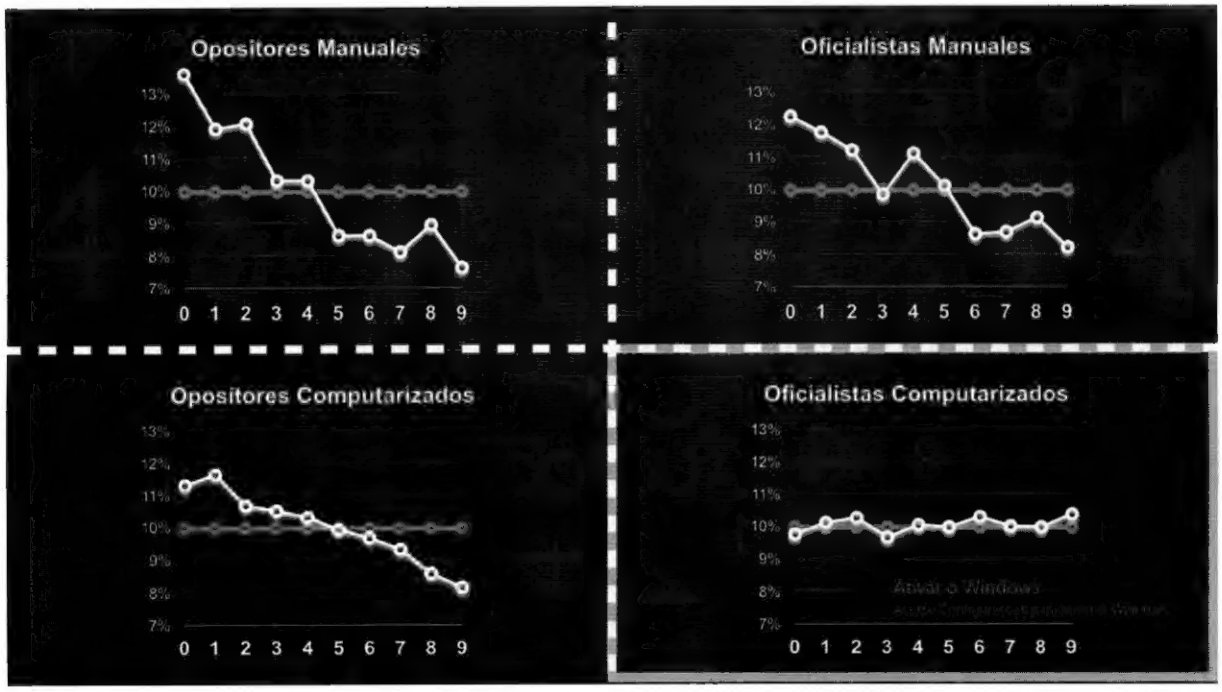
In this example, the inverse occurs. Where there should be a "descending curve", there is an "almost straight", or a slightly ascending curve. This type of situation (curves where there should be straights, or straights where there should be curves, or rising curves versus falling curves) materializes the highest level concern sign about the integrity of the data sets. This constitutes a strong indicative element.

This kind of inversion is exactly what happened in the controversial Venezuelan election of 2004. The inversion of axes occurred, which may mean that some of the number sets are not products of natural distribution, but of random number generators. The hypothesis is explained in the video documentary "El Poder de la Matemática", available on Youtube. [https://www.youtube.com/watch?v=IZNiFCvlbP8&t=303s]

The video is described as follows : *""May 25, 2013 Documentary showing the Enron case and the 2004 Presidential Recall Referendum in Venezuela, in which the use of mathematics, specifically Benford's Law, was used to detect fraud".* Here are some screenshots taken directly from this documentary:


Dist. Benford vs. Dist. Uniforme
13%
12%
11%
10%
9%
8%
7%
Frecuencia
0 1 2 3 4 5 6 7 8 9
Segundo Dígito


Venezuela 2004
Votos Oficialistas Computarizados
13%
12%
11%
10%
9%
8%
7%
Frecuencia
0 1 2 3 4 5 6 7 8 9
Segundo Dígito


Opositores Manuales
Oficialistas Manuales
Opositores Computarizados
Oficialistas Computarizados
0 1 2 3 4 5 6 7 8 9

In the 7 min and 44 seconds of the video is presented the situation in which the inversion between straight lines/curves occurs (highlighted in yellow). It is observed that among the 4 numerical groups graphs where there should be a behavior adhering to Benford's patterns, this occurs only in 3 groups. One of them does not follow the Benford patterns, but rather the patterns of equitable digits distribution. This tends to be a pattern anomaly by NBL view.

This behavior [*inversion between curves and straight lines*] was identified in at least 4 situations in the 2022 First Round Brazilian presidential elections.

CONCLUSION

i) The sixth column of each table contains the percentage variation that occurred between the parameter considered "ideal" for the NBL and the actual data found. In several cells this variation had a significant amount.

ii) Obtaining the average variation of each table we have the following scenario;

ii.a) 30 times - in 30 scenarios - this difference exceeded the 10% variation mark outside the ideal NBL parameter.

ii.b) In 18 occasions this average discrepancy exceeds 20%;

ii.c) In 7 occasions it exceeds the average of 30%, 1 of them exceeds 40%, and another exceeds 50%.

iii) The comparative of items "i", "ii" e "iii" considers 30 tables (5 regions composed by the 4 most voted candidates, plus blank and null votes) referring to the 1st digit analysis;

iv) There are other types of variations that do not claim to the standards considered adequate, considering the second and last digits analysis, as well as there are specific situations of more intense aggravation (such as the cases of "zero" cells in the states mentioned). However, these data are localized and need to be examined in the context of the national data set.

v) Records found in the data sets generate the inversion between "descending curves", "straight", "ascending curves", which also occurred in the 2004 Venezuela case cited in the body of the text.

Considering the analyzed data as well as the evidential profile of Benford's Law (and not probative), the most correct procedure to be adopted in sequence should be a deep and detailed audit, with analysis and comparison of PHYSICAL DOCUMENTS against the graphic evidence identified, in order to be able to elide or confirm the detected anomalies.

Ex positis, and considering the speed and scarcity of time, it is concluded that [as in the past] there is a potential for risk of undue penetration and the realization of artificial data tampering that justifies the discrepancies found - without this being assertion constitutes, at the present time, a definitive evidence. This fact constitutes an evidentiary element and may give rise to the adoption of **EMERGENT** and **URGENT** measures regarding the preservation of **NATIONAL SOVEREIGNTY** of the Brazilian Nation in the face of possible international interests. It is necessary to guarantee the complete independence of the results for the second round, in the face of any international threat, as recorded. Such measures consist of joint and cooperative action of federative bodies, each within its own area of operation.

Obs: This document is a work in progress and will be expanded in the coming days. The accelerated way in which the study was produced and reported may lead to eventual spelling and writing inaccuracies, and it is under review immediately after its conclusion.